

W5YI

America's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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Fred Maia, W5YI, Editor, P.O. Box 565101, Dallas, TX 75356-5101
Electronic mail: fmaia@internetMCI.com Website: <http://www.w5yi.org>
Tel. 817-461-6443 FAX: 817-548-9594

In This Issue...

*FCC Testing New Call Sign Query
Phase 3-D Amateur Satellite Delayed
Dayton HamVention Award Winners
ARRL Executive Committee Meets
Bringing Together ARES and RACES
More on Herb Schoenbohm KV4FZ
NASA Ends Shuttle Flight Early
International Space Station Delayed
Censorship on the World Wide Web
Stock Brokers Become Bookies
FCC Approves Digital Television
Social Security Website Goes Dark!
U.S. Government Filters Health Sites
Internet Telephony - Special Report*

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FCC Beta Testing Amateur Radio Database Query Program

Last July 18th, Volunteer-Examiner Coordinators attending their Annual Conference in Gettysburg, PA were shown beta copies of two new interactive computer programs that the FCC was working on. One of them was a new Internet "Vanity" call sign filing procedure. The electronic FCC Form 610-V was eventually put on line and has provided an expedited way for Extra Class amateurs to obtain a new call sign. (The gates for Advanced and lower class operators has not yet opened.)

The other "fcc.gov" website project that the FCC was working on was the "Amateur Radio Database Query." This program permits Amateurs to type in certain information and the FCC's computer will search for and display the requested information ...or a range of records. This means that Vanity call sign applicants will be able to query the FCC's computer to determine if a specific call sign is available ...or that applicants who have passed license examinations will be able to obtain their new call sign right from the FCC database.

On April 8th, the FCC issued a Public Notice stating that their new Amateur Radio Query program had been posted to a World Wide Web Beta test site. "This application allows realtime query to the Amateur database using a number of parameters including dates, zip codes, licensees, and call signs."

Using a Web Browser, you must carefully follow these instructions to get to the Beta Test site which is located on an FCC server:

- 1) Type the following URL into your browser:
<http://www.fcc.gov>
- 2) Scroll down to the bottom of this page and SELECT: "Wireless" to access the Wireless Telecommunications Bureau's Home Page. (By "SELECT", we mean to use your mouse to click on the underlined link.)
- 3) SELECT: "Wireless Electronic Commerce" from the WTB Home page.
- 4) To get to the WTB Beta Test Site, SELECT "Beta Page for Future Electronic Commerce Applications."
- 5) Once you have accessed the WTB Beta Test Site, you will see a paragraph that says, "The following FCC forms are available for testing and evaluation by all interested parties. These forms are ONLY for test and comment," select: "Amateur Radio Query - BETA testers" (There is also another possible selection entitled "Amateur Radio Query - Volunteer Examiner Coordinator [Login and Password Required.] This is for VECs only.)

A "disclaimer" will appear that says the Commission makes no warranty on any of its remote software packages nor is the FCC liable for any damages.

The beta version is available for testing and use without charge until May 8, 1997. In Report and Order 95-69, the Commission established a fee schedule for on-line access to the FCC's network.

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W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #2

May 1, 1997

Once the program is put online, access will be available to the public through a "PPP Dialer System" which uses a "900" telephone number. Our understanding is that amateurs will be able to access the Amateur Radio Database Query for two minutes free of charge. After that, a charge of \$2.30 per minute will be applied to the user's telephone bill. This is to prevent a large number of users from tying up the program for long periods of time. The Query Form looks like this:

FCC - Federal Communications Commission Amateur Radio Database Query

See [Query Instructions](#) for help.

Name Licensee:

Call Sign:

Zip Code:

State:

Club Name:

Country Alien:

Date License

Issued between: and

Expired between: and

Maximum Count:

Reinitiate Form Amateur Radio DB Query

[\[Home\]](#) [\[Index\]](#) [\[Help\]](#)

[Mail your comments or suggestions \(To: \[webmail@fcc.gov\]\(mailto:webmail@fcc.gov\)\)](#)

Federal Communications Commission - Amateur Radio DB Query

The "Help" instructions calls attention to the use of the percent sign ("%") as a Wild Card character. The system looks for exact matches. The most effective way of searching is by call sign. If you are unsure of the entire exact name - or how it appears in the database, then use a wild card search. For example, if the licensee name is Rumpelstiltskin, but you are not sure of the correct spelling, enter Rump%. Only individually licensed amateurs may be queried. Punctuation is not used in the database.

● **Phase 3D Amateur Satellite delayed** - Modifications to the Ariane 5 rocket's electrical systems and software will mean another costly delay for the Phase 3D Amateur Radio satellite. The European Space Agency (ESA) has announced that the Ariane 502 which will carry Phase 3D aloft from Kourou, French Guyana, has been rescheduled for a mid-September launch. ESA said the schedule change was in response to recommendations of a board of inquiry that looked into the causes for the failure of the Ariane 501 launch last year.

AMSAT-NA President Bill Tynan, W3XO, said a complete analysis had not yet been done but that he believed the delay would add "on the order of \$100,000 to Phase 3D's cost. That's on top of an estimated \$200,000 combined funding shortfall that AMSAT-NA and AMSAT-DL were reporting in late February. So far, AMSAT-DL has invested nearly \$2 million in Phase 3D, compared to nearly \$1.4 million for AMSAT-NA. "Every month adds costs," Tynan concluded. Phase 3D fund-raising efforts will continue. (Donations may be sent to: AMSAT, P.O. Box 27, Washington, DC 20044.) Tynan emphasized that the Phase 3D team plans to take maximum advantage of the schedule change to perform additional testing.

-- Thanks: ARRL & AMSAT

● **HamVention announces award winners** - Three amateurs have been selected to receive this year's coveted Dayton Amateur Radio Association awards. The winners, announced March 23, will be the special guests at an awards banquet in their honor the evening of May 17, in Dayton.

The 1997 Dayton HamVention **Amateur of the Year** is **Leo I. Meyerson, W0GFG**, of Omaha, NE. An amateur for 69 years, W0GFG founded World Radio Labs and was a manufacturer of countless transmitters and receivers, including the Globe Scout and the Globe King. Meyerson joined QCWA in 1968 and was the first chairman of the QCWA Scholarship Program. At 86, Leo who still plays tennis, plans on being at the Hamvention Banquet to accept his award.

The **Technical Excellence Award** goes to **Albert J Ward, WB5LUA**, of Allen, Texas. WB5LUA garnered this year's award for his accomplishments in amateur VHF, UHF, and microwave technologies. Ward has designed numerous circuits used in these areas. Licensed since 1965, he holds *Worked All States* awards for 6, 2, 220, 432, and is currently working on his WAS for 1232 MHz. Ward is an electrical engineer at Hewlett Packard.

The **Dayton Special Achievement Award** for 1997 goes to **Joseph J Fairclough, WB2JKJ**, of Sea Cliff, New York. Fairclough is being honored for his work in integrating amateur radio into the language arts curriculum of the New York City public school system. His first class, at Junior High School 22, on the lower east side of Manhattan, had 30 students. Today, he has over 500 students enrolled in his Educomm program -- "Education through Communications" -- in school systems throughout the country. -- Thanks WA6ITF & DARA

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #3

May 1, 1997

ARRL EXECUTIVE COMMITTEE MEETING - APRIL 12

The ARRL's Executive Committee met at the Airport Marriott hotel in St. Louis on April 12. The meeting was chaired by League Pres. Rodney Stafford KB6ZV. Here are some of the items of more than routine interest.

ARRL General Counsel Chris Imlay, W3KD reported on FCC matters:

- **GN Docket 96-228**, re: implementation of Wireless Communications Service (WCS) in the bands 2305-2320 and 2345-2360 MHz. The auctioning of these bands was mandated by Congress, so the FCC had no choice but to comply. The Amateur Service is now secondary to WCS in the band 2305-2310 MHz. ARRL is seeking an upgrading of the Amateur Service allocation at 2300-2305 MHz to primary, via a Petition for Further Rule Making in ET Docket 94-32.
- **MD Docket 96-186**, re: FCC fee schedule for fiscal year 1997. The schedule calls for an increase from \$3 to \$5 per year in the fee for an amateur vanity call sign. Thus, the ten-year fee would go from \$30 to \$50. On motion of Kay Craigie, WT3P, the General Counsel was instructed to file reply comments seeking, in the interest of fairness, a postponement in the implementation of the higher fee until after all four vanity call sign gates have been opened and all amateurs have had an opportunity to request a specific call sign for the existing fee.
- **WT Docket 97-12**, re: spreading codes for spread spectrum emissions in the Amateur Service. The NPRM, on which comments are due on May 5 and reply comments on June 5, proposes almost exactly what the ARRL had requested in its petition, RM-8737. The ARRL will support the FCC's proposals.
- **WT Docket 96-188**, re: implementation of the International Amateur Radio Permit. The comment and reply comment periods have closed and final action is awaited.
- **ET Docket 93-62**, re: RF exposure. The FCC is reviewing the numerous petitions for reconsideration, including that of the ARRL. The revised OET Bulletin 65 has not yet been released. It is expected to be released shortly in the form of a core document, with separate supplements for the various radio services.
- **WT Docket 95-57**, The staff was instructed to develop a plan for ARRL participation in the special event call sign program that has been adopted by the Commission, that the plan provide for appropriate limits on the number and duration of use of 1x1 call signs by an individual, and that it require a minimum of administration and be offered at no cost to the amateur community.
- **Review of status of petitions for rulemaking.** The League's petition to permit Advanced class Volunteer Examiners to administer General class examinations, filed on Oct. 28, 1996, has not yet been given a file number.
- **Vanity call sign program.** Mr. Imlay investigated what alternatives may be available to address concerns about certain cases in which multiple vanity call signs have been issued to club stations having the same trustee. He reported that in the absence of evidence of trafficking in call signs for profit, no enforcement assistance could be expected from the FCC. The committee discussed various options for rule making.
- **Executive Committee study of adequacy of FCC rules governing Volunteer Examiner qualifications.** Chris Imlay reported that the FCC has determined that the Americans with Disabilities Act of 1990 (ADA) does not apply to telecommunications services other than broadcast and common carrier licenses. It was voted to recommend to the Board the adoption of a policy that ARRL Volunteer Examiners be instructed to not administer examination elements that they have not passed

themselves.

- **Executive Committee study of abuses of Morse code examination element waiver.** Dave Sumner discussed possible options for reducing the potential for abuse. It was voted that the committee recommend to the Board that the following changes in rules or procedures be requested of the FCC:

- (1) To be accepted by a VE team, a physician's certification stating that an individual is unable to pass a 13 or 20 word-per-minute telegraphy examination because of a severe handicap, the duration of which will extend more than 365 days beyond the date of the certification, must be accompanied by evidence that the individual has made an attempt to pass the examination by being accommodated in accordance with Sec. 97.509(k); and
- (2) VECs shall be authorized and required to request from the physician, on behalf of the FCC, medical information pertaining to the individual's handicap, and shall not process the Form 610 until the information is received.

Steve Mansfield, N1MZA reported on legislative matters as follows:

- Representative Eshoo and 21 co-sponsors have introduced HR 1013, the **Amateur Radio Volunteer Services Act of 1997**. The bill seeks, for volunteers performing specific functions on behalf of the FCC, the same liability protections that they would be afforded if they were FCC employees.
- Sen. Feingold has been revising the bill that he introduced in the 104th Congress as S 2025, which would have permitted **local authorities to act against users of illegal CB equipment**. Sen. Feingold's staff has been very cooperative in working with the League to resolve certain ARRL concerns.
- The Volunteer Resources Committee recommends that the League **seek an increase in the legislative cap on volunteer examination fee reimbursement**. The existing cap, which is adjusted annually for inflation and is now \$6.26, was set in 1983 at \$4.00. Since that time, the services being provided by VECs at additional cost to them have expanded to include, among others, maintenance of the question pools and electronic filing of applications. An increase in the cap would not necessarily result in an increase in the fee set by ARRL/VEC or any other VEC, since each VEC is free to set its own fee as long as it does not exceed either the cap or actual out-of-pocket costs. The Secretary was instructed to submit for mail vote by the Board of Directors the following resolution: "Resolved, that the ARRL shall seek amendment of Section 4(f)(4)(J) of the Communications Act to set the total amount of allowable cost reimbursement per examinee at a maximum of \$9.00, adjusted annually every January 1 for changes in the Department of Labor Consumer Price Index."
- **International and organizational matters:** Mr. Stafford noted that the **IARU Region 3 Conference will be held in Beijing September 8-12, 1997**. The ARRL delegation will consist of Messrs. Stafford, Mendelsohn, Sumner, Rinaldo, and International Programs Manager Naoki Akiyama, NX1L. International Affairs Vice President Larry Price, W4RA, will attend in his capacity as Secretary of the IARU.
- Mr. Sumner reported on the status of planning for the **implementation of an ARRL audio news service**. Committee members expressed the desire that planning be completed prior to the July Board Meeting.
- On behalf of the Administration and Finance Committee, of which he is a member, Steve Mendelsohn noted that the **League's financial performance for the first quarter of 1997 had exceeded the budget plan**, thanks to the good work of staff.

WSYI REPORT

America's Oldest Ham Radio Newsletter

Page #4

May 1, 1997

AMATEUR RADIO NOTES

■ **Real-time radio wave propagation forecasting is available on the Internet!** DX types will find the near-real-time MUF (maximum usable frequency) and other solar prediction maps posted to the Internet very helpful! They are put on the Web by the University of Lethbridge at Lethbridge, Alberta (Canada).

These maps, which are updated every 30 minutes, are produced using PROP-LAB-PRO Version 2.0, a very powerful radio propagation software package. Besides MUF, critical F2 and E-layer (penetration) frequencies and F2 maximum heights are posted.

Amateur radio operators can determine maximum usable frequencies for any world-wide path at a specific UTC (Zulu) time. For example: the MUF for any 3,000 kilometer (2000 mile) path can be determined by finding the midpoint (or half-way point) of the path and examining the MUF at that midpoint on the map by finding the labeled MUF contour value. All contours are given in MHz. There are also ways to calculate MUFs for longer and shorter paths. Check out: <http://holly.cc.uleth.ca/solar/www/realtime.html>

■ **The correct telephone number for the FCC's National Call Center is: 1-888-225-5322 (1-888-CALL-FCC).** We erroneously published this to be an "800" number in our March 15th issue. Again, the prefix is "888." This number may be used to obtain information about just about any subject involving the FCC -- including new Amateur Radio call signs.

■ **The ARRL filed a Petition for Rulemaking last month seeking relaxation of certain RACES (Radio Amateur Civil Emergency Service) regulations.** In short, the League wants a better working arrangement between amateur stations active in RACES, other civil defense organizations operating under RACES and the League's ARES (Amateur Radio Emergency Service.)

RACES is organized under the auspices of the Federal Emergency Management Agency (FEMA) and operates at the local level under the jurisdiction of local civil defense agencies. ARES (the Amateur Radio Emergency Service), begun by the League in 1935, is a system of ARRL networks of radio amateurs active in emergency communications at the state or sub-state (section) level. It is not under the

control of local civil defense authorities and is not recognized in the amateur service rules.

RACES and ARES have thus developed into organizations independent of each other. By rule §97.407, RACES stations may only communicate with other RACES or recognized civil defense stations and not other radio amateurs -- even when they are active participants in ARES. It is therefore impossible for them to participate together in joint drills.

The ARRL believes "This is an undesirable situation, which inevitably segregates amateurs engaged in exactly the same types of emergency communications work, and limits the ability of radio amateurs to work together for the benefit of the public."

ARRL asks for a rule amendment permitting ARES and RACES "intercommunication, without disrupting or interfering with the functions of civil defense managers, or their control over communications transmitted in RACES..."

The League also wants the one-hour limitation on RACES drills and exercises dropped; "...a maximum of five hours per week is a reasonable upper limit for emergency communications drills and tests."

■ **The seemingly never-ending battle for Herbert L. Schoenbohm, KV4FZ (Kingshill, U.S. Virgin Islands) to retain his amateur radio station and operator license continues.** He is still appealing the FCC decision not to renew his Extra Class ticket.

In 1992, Schoenbohm was convicted in federal court of fraudulently obtaining free long-distance telephone calls. He was sentenced to two months in prison ...later changed to house arrest with two years probation and a \$5,000 fine. Schoenbohm started serving his sentence on January 11, 1993. The conviction was unsuccessfully appealed.

The FCC believes that Schoenbohm "...lacks the requisite qualifications for a renewal of his amateur service license..." and that his criminal conviction "...is relevant to evaluating the likelihood that he will comply with the Commission's Rules as a licensee in the amateur service." WT Docket 95-11 seeks to revoke his license.

After a hearing, Administrative Law Judge Edward Luton rendered an Initial Decision (FCC 96D-01) on January 26, 1996 denying Schoenbohm's application to renew his license. The Initial Decision was appealed to the FCC's Review Board where it was determined to give Schoenbohm another hearing on some different

issues that were raised.

This hearing took place on April 1, 1997. The FCC's Office of General Counsel has now remanded the case back to the ALJ for another Initial Decision. Meanwhile, KV4FZ continues to operate -- even though the FCC database shows him as having an expired Extra Class license.

■ **NASA is eager to finish shuttle mission STS-83.** Even before the space shuttle Columbia returned home 12 days early on April 8th, NASA was already planning to return the craft to orbit. Consideration is being given to continuing the mission during July.

The mission was cut short when one of the three power generators failed. Columbia's crew had been living in near darkness, working with flashlights since the power generator was shut down. It was only the third time that an orbiter had to return home early.

Eighteen different schools had been scheduled to talk via Amateur Radio with the astronauts aboard the shuttle as part of the Shuttle Amateur Radio EXperiment, or SAREX. The three hams aboard STS-83 were Jim Halsell, KC5RNI, the mission commander, Janice Voss, KC5BTJ, and Donald Thomas, KC5FVF. The SAREX schedule had included contacts with schools in the People's Republic of China and Japan (Okinawa).

The SAREX/ARISS Working Group (SAWG) has requested that SAREX be included if the mission is reflown."

■ In the meantime, four out of a scheduled round of ten MIREX school contacts have taken place so far with ham-astronaut Jerry Linenger, KC5HBR, aboard the Russian Mir space station.

On May 15th, NASA is scheduled to return Linenger to earth aboard Atlantis and replace him with another ham-astronaut: Mike Foale, KB5UAC. But it may not happen since NASA is concerned about safety problems aboard the aging Mir space station. There was a fire aboard Mir in February and the main oxygen-generating system was damaged. There is also a problem with fumes on Mir.

■ **A permanent amateur radio presence is planned for the "Alpha" International Space Station.** That too has run into equipment (and funding) problems. In-space construction of the station that was to have begun in late 1997, now is being put off until next year. It seems that construction in Russia of a crucial third element (a service module that is

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #5

May 1, 1997

needed to house crews and provide steering for the station) has not yet begun. The delay was blamed on the cash-strapped Russian government's failure to fund the service module.

The first two sections, a Russian-built storage center and a U.S.-built connecting tunnel are ready for launch. The Alpha Space Station is to be assembled in several stages over five years. A delay in any section postpones the entire project and increases its cost.

Boris Yeltzin has now confirmed that he will release some \$250 million to the project. Even so, that means the module won't be ready until December 1998. Launch of the first section is now being delayed until October 1998.

And if it turns out that Russia still won't have the third module ready by the end of 1998, NASA will have to provide a substitute service module. This will cause still more delays and an additional \$200 million.

Congress is very concerned about the future of the International Space Station and many House members want to eliminate Russia as a prime builder of critical parts. Some even want to kill the project entirely. The cost of building the station is estimated at \$40 billion, \$10 billion of which has already been appropriated.

Originally proposed in 1984 by President Reagan, the International Space Station has undergone several redesigns and changes due to cost overruns. President Clinton invited the Russians to join the project in 1993 as a way to save time and share costs. The anticipated \$2 billion saving is now quite questionable.

■ The ARRL reports that **many hams geared up to help after communities in western Minnesota faced severe flooding** along the Minnesota River and in the Red River Valley. "To top off an already serious flooding problem, we were faced with blizzard conditions in NW Minnesota around Fargo/Moorhead and received as much as a foot and a half of heavy wet snow," said Minnesota's SM, Randy "Max" Wendel, NØFKU.

Additionally, those frantically trying to save their communities from flooding also have had to deal with high winds -- as high as 60 mph in some locations -- and low temperatures. In southwestern Minnesota along the Minnesota River Valley, several communities were evacuated. Electricity and telephone service in the Granite Falls area was lost. The hope is that the flood waters will recede before the ice melts and worsens the situation.

Wendel reports that an official statewide ARES (Amateur Radio Emergency Service) HF net was activated to assist the Salvation Army in Minneapolis-St. Paul. The Salvation Army is bringing in relief supplies for the Granite Falls area.

"Hams have generally been providing some isolated communications for their local chapters of the Salvation Army plus providing communication for relief efforts and supplies to affected areas," Wendel said.

A lot of volunteers have turned out in support of sandbagging efforts. One small area along the Minnesota River in towns of Montevideo and Granite Falls has laid down some 400,000 sandbags in an effort to minimize flooding.

Other hams have been busy reporting new flooding areas to the National Weather Service. An informal ARES HF flood net was being activated each evening (5 PM CST) on 3990 kHz to gather flood-related information. Wendel says The Associated Press has been referred to various hams around the state to get reports from the Amateur Radio community.

■ In our last issue (page 5) we mentioned that the FCC had approved a **Special Event Call Sign System** using 750 1-by-1 format (one letter, one digit, one letter) call signs. We have received several inquiries as to whether that figure should not have been 780 since that was the original FCC proposal. (See paragraph 6 in the *Notice of Proposed Rule-making* adopted April 25, 1995 in Docket No. WT 95-57.) Three prefix letters (K, N or W) times ten call sign districts 0-9 times 26 suffix letters A-Z equals 780.

Apparently the FCC initially overlooked the amateur station call sign rules contained in Part §2.302 which allocates all 1-by-1 call signs beginning with a K, N or W to the amateur service. There is a footnote, however, in the Part 2 rules that stipulates that the "letter 'X' may not follow the digit" in 1x1 and 2x3 format amateur station call signs. This is so that "Amateur" and "Experimental" stations will not get identical call signs.

A further note under "Experimental" station call signs requires that the "letter 'X' follows the digit" in 2x3 experimental station call signs. KA2XAA through KZ9XZZ call signs are specifically assigned to "Experimental" (non-amateur) stations (such as to commercial companies developing new technologies.)

Here is the confusing part. Strangely, there is no provision in the Part 2 Call Sign assignment rules for the assigning of

1x1 call signs to **anyone** when the letter "X" is the suffix letter! It would take additional rulemaking (which was not proposed in WT 95-57) to amend Part 2.302 to add the 1-by-"X" call signs back into the Amateur Service inventory.

CUTTING EDGE TECHNOLOGY

■ The March 31st issue of *Business Week* says that **the U.S. economy is no longer tied to traditional indicators** such as automobile sales and housing starts. Instead, information and technology will determine how long the U.S. economic expansion lasts. And there are signs that it is slowing down!

■ **Internet Traffic School for automobile driving violators is being tested in Los Angeles!** Some courts are allowing traffic offenders to attend (and get lower insurance rates and clean driving records) by accessing a website from their home PC. You need to pass an interactive course ending exam to insure that you paid attention.

■ **Your face as a fingerprint!** Polaroid Corp. (Cambridge, Mass.) has developed facial recognition software that digitizes and "reads" photographs. Certain measurements are then used to positively identify photographed people. The technology could be used as a security feature on driver's licenses and make fingerprinting unnecessary. For example: when drivers apply to renew their license, their new photo parameters could be compared with information stored in a database.

HIGH TECH HARDWARE

■ **The price of cable modems is dropping!** Soon you will be able to surf the Web from your living room TV. The big advantage is much higher speed than with a telephone connection. The going price for cable modems used to be in the \$500 range. Zenith recently reduced their price to \$299 for large quantities.

■ **Ricoh (the Japanese electronics manufacturer) has a new re-writable (640-MB capacity) CD drive.** Suggested retail is \$599.00. It is also backward compatible to regular CD-ROM disks.

■ **IBM has a new "SystemCare" leasing program that permits PC users to automatically upgrade.** Aimed at small

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #6

May 1, 1997

businesses, customers pay a flat fee for extensive service, support and a new replacement computer every two years. The goal is to overcome complaints that it is too costly to maintain and replace computers.

THE WORLD WIDE WEB

■ **Censorship of the Internet is Increasing!** Internet Service Providers in Austria went on strike March 26th to protest the Government close down of VIP-net. The ISPA (*Austrian Association of Internet Providers*) called the strike when one of their ISP members was held accountable for the illegal (hard-core content) activity of one of their customers. ISPA contends that individual users and not the carrier is responsible for any violations. Germany also claims that providers are liable for material fed into the net through their gateways.

Communist Vietnam takes a different approach. All Internet content entering or leaving the country is filtered through one government ISP.

Last fall, ASEAN (the Association of South East Asian Nations -- Brunei, Malaysia, Singapore, Indonesia, the Philippines, Thailand and Vietnam) agreed to police the Internet and block off sites that run counter to Asian values.

The Chinese Government selectively blocks Internet access to many web sites including CNN and the Wall Street Journal, and overseas sites it considers to be dissident.

In France, ISPs are not held responsible for content transmitted through their systems if they block access to sites and newsgroups deemed inappropriate by a government organization called the *Comite Superieur de la Telematique*. If they do not, they will be held liable.

■ According to an April 2nd article in the *New York Times* newspaper, the "cyber-sex" market is very profitable. Beth Mansfield, a Tacoma, Wash. housewife who founded Persian Kitty's Adult Links (a list of links to more than 1,000 adult sites) generates \$80,000 in advertising a month! The "low-budget, one-woman show ... works out of her dining room." The *New York Times* quotes an Internet industry analyst as saying that 10% of all retail business on the Web (an estimated \$52 million) consists of erotic content.

■ **Prodigy, the online service whose business has deteriorated** in the U.S. is expanding into Africa and Egypt where it

has little competition. "Prodigy Africa Online" has offices in many African countries and an 85% market share in Kenya where it started operations just last year!

■ **It is beginning to look like America OnLine will be purchasing CompuServe.** AOL has 8 million subscribers; CompuServe is No. 2 with 3 million.

The Microsoft Network is third with 2.2 million subscribers worldwide, up from 1.6 million just 6 months ago. MSN says they will be No. 2 by year end. (In keeping with their television-show format, MSN has just added 14 new "shows.")

CompuServe owner H&R Block (the income tax preparers) wants to get rid of CompuServe since it is a drain on their overall performance. Asking price is \$1.3 billion. CompuServe (which lost \$68 million in its second quarter) dominates the online market in Europe and Japan where AOL wants to expand. A purchase of CompuServe will also give relief to AOL's strained capacity by providing more modems and access points. There is some concern, however, as to whether the Justice Department would permit the merger.

COMPUTERS & SOFTWARE

■ **Another merger being rumored is the marriage of Oracle and Apple Computer ... or Sun Microsystems and Apple!** Apple continues to be in deep financial trouble. Its PC market share is shrinking (now down to 5% from 10% three years ago) and its losses are skyrocketing (more than \$1.5 billion in the last eighteen months alone!)

Many regional stores and national chains are either discontinuing the brand or giving it less shelf space. Apple is fighting back with an "Apple is Back" advertising campaign. They are trying to excite customers about their new Power Macintosh 6500 series that runs at 300 MHz ... faster than any Intel-based PC. (Cost is \$2000-\$3000 without monitor.)

■ **One report has Oracle Corp. chairman Larry Ellison leading an investor group to take over Apple** and then part of their production facilities to build low-priced "NC" products: Network Computers and servers.

If you believe all the hype, NCs are predicted to outnumber PCs within five years. One research company said 35 million NCs would be in operation by the year 2000. Small branch companies will use them to communicate with main

servers. (For example, local florists could inexpensively access the FTD website.)

Microsoft is also working on their "Windows Terminal," a single function network workstation with no disk drive or stored programs. It would access programs stored on a Windows-NT server over the Internet.

■ And still more rumors! We heard that **Compaq Computer (the nation's largest PC manufacturer) is planning on buying the nation's largest direct PC marketer, Gateway 2000, Inc.** Gateway is located in the middle of nowhere, but certainly knows how to sell PCs by mail and telephone! Their key to success? Gateway's customer satisfaction rate is among the highest in the industry!

Gateway 2000, Inc., was founded in Sept. 1985, in Sioux City, Iowa, by cattlemen and moved to its present location in North Sioux City, SD in Jan. 1990.

By placing ads in computer-related publications and selling directly to end users, the firm pioneered direct-marketing of PCs. They generated \$100,000 revenue in their first four months of business.

In 1987 the firm began selling completely configured PCs to technically sophisticated hobbyists. Gateway broke \$1 billion in sales in 1992 and became a publicly traded company in 1993. Sales in 1994 topped \$2 billion!

Today, Gateway 2000 sells more PC compatible systems in the U.S. through direct marketing than anyone! In fact, Gateway ships 8% of all personal computers sold in the U.S. Their sales in 1996 was over \$5 billion (vs. \$3.7 billion in 1995) and they are still climbing. Not bad for a couple of cattle ranchers. Check out: <http://www.gw2k.com> ... especially their neat "cow pages." They make no bones about the fact that they are country hicks!

■ **Nutty Website of the Month!** Some Princeton University students have a page on the Internet that algorithmically generates names for Chinese restaurants from component words. Each time you visit this page (or press reload) you'll get a new Chinese restaurant name. <http://campuscgi.princeton.edu/~casey/chinagen>

■ **"Ask yo' Mamma" is a brand new Internet search engine.** "The Mother of all Search Engines" simultaneously searches the seven most popular search engines. URL is: <http://www.mamma.com> (Yes, there are three M's in mamma.)

■ **Stock brokers become bookies!**

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #7

May 1, 1997

An article in last week's *Wall Street Journal* tells how two Pacific Stock Exchange workers, **Jay Cohen and Steve Schilling** quit their job and headed to the Caribbean island of Antigua to start an Internet sports book gambling operation.

Their betting business is called World Sports Exchange. Their website is located at: <http://www.wsx.com> The pair raised money by borrowing from friends and co-workers and selling 1% shares in their web venture for \$30,000 each.

A friend wrote the gambling software -- which "...isn't much to look at." But since January, more than 100 gamblers have opened accounts. "The average account is \$1,000 to \$3,000, but some high rollers have risked \$30,000." The Sports Exchange gets a 10% commission on all money bet.

Antigua is one of only two Caribbean islands with an undersea fiberoptic link to the U.S. An Antiguan official says that they are get calls "every hour" from people looking for a gaming license.

■ A study by the National Computer Security Association said that **E-mail is now the leading cause of computer viruses**. The infection rate has tripled in the past year in spite of the fact that 73% of the machines surveyed by NCSA used anti-virus software. Macro viruses carried in common word-processing (e-mailed and attached) documents were the biggest problem.

■ **Net.Medic is a low cost (under \$50) Windows-95 "browser companion"** software program that tells Internet users where and why delays are occurring. It monitors computer, modem and Internet Service Provider performance and works on either Netscape or Microsoft browser versions 3.0 and above.

■ **Microsoft's long awaited "Memphis" (Windows-97) operating system upgrade will now become Windows-98. Microsoft shares closed down 4% on the news.** The delay is being caused by difficulty in adding new "push" search technology into the upcoming version of Microsoft's Internet Explorer (Version 4.0) Web Browser which will also be included in the operating system. The first "Windows-9x" beta test version is expected on July 1.

■ Meanwhile, **Netscape moved ahead of Microsoft by unveiling their new "NetCaster" proprietary content push system earlier than planned.** Formerly

code-named "Constellation," the system allows users to automatically collect wanted information into "channels." NetCaster will be built into Netscape's Communicator 4.0 web browser which will ship June 30. By shipping earlier than Microsoft, Netscape hopes their version will become the industry standard. Several content suppliers (including ABC, CBS and CNN) said they will be NetCaster publishers.

Microsoft's new (Windows-95 only) Internet Explorer 4.0 (which won't be ready until fall) will also support a "push" technology called CDF (Channel Definition Format.) Microsoft now has captured about one-third of the browser market. (It only had 10% a year ago!)

The theory behind "pushed" content is that it will end the long delays in finding what you want from among the Web's 150 million pages. And there will be more than a billion pages of information on the WWW by 2000!

Customized "TV Channel-like" web-casting is strongly supported by advertisers who view the technology as broadcasting rather than searching. The leading proponent of the technology is "PointCast" which recently turned down half a billion dollars for their company from NewsCorp. PointCast already claims one million users!

WASHINGTON WHISPERS

■ After ten years of negotiations on **April 3rd, the FCC unanimously laid the groundwork for introducing free Digital Television (DTV) to the American people.** The top four networks in the top ten markets will be on the air with brilliant, high-definition wide-screen video pictures and CD-quality audio no later than May 1, 1999, markets 11 to 30: 6 months later. More than half of the U.S. households will be covered by then. All commercial TV broadcasters must offer digital signals within five years. Non-commercial stations have until 2003.

Several large broadcasters in the nation's largest cities, however, have committed to begin digital operations by November 1998. The objective is to stimulate DTV receiver sales during the Christmas holiday selling season. DTV resolution approaches that of 35 mm movies.

In the Telecom Act of 1996, Congress directed the FCC to issue licenses for digital television to existing broadcasters. The second channel that broadcasters will be getting free is estimated to be worth up to \$70 billion! At the end of an analog-

to-digital transition period, the nation's 1500 broadcasters will return their current 6-MHz analog channel (a total of 78 MHz) to the FCC for auctioning. The Commission has set a target of 2006 as a reasonable end-date for NTSC (analog) service. The FCC will immediately recover 60 MHz of UHF spectrum presently allocated to TV Channels 60 to 69.

DTV will take place in VHF/UHF spectrum located between TV channel 2 (54 MHz) and channel 51 (698 MHz.) Broadcasters will be assigned a DTV channel which replicates their existing service area. Eventually, all DTV broadcasts will be packed into spectrum currently taken by channels 2 to 46 ...or 7 to 51.

HDTV sets will cost from \$2,000 to about \$5,000 when they become available next year. Existing analog TV sets will need a special converter (cost \$150 to \$300) to pick up DTV. The market to replace the nation's aging analog sets is estimated at \$150 billion!

■ **In a major concession to Microsoft, Intel and Compaq, the FCC did not specify a digital TV format.** This could permit the introduction of PC-Theaters and Broadcast PCs. Broadcasters would have to transmit a progressive (720 line) scan rather than an interlace (1080 line) system for it to work. A dual system will perhaps be the ultimate solution.

Computer companies view DTV as simply a big screen computer. Microsoft believes that PC-DTV will cost about the same price as existing computers.

Intel wants to use the vertical blanking interval (an unused gap between video images) to combine Internet-access and DTV broadcasting. Toward that end, Compaq and Intel have just unveiled their PC Theater which features TV viewing, surround sound audio, DVD (digital video disk) movies, wireless keyboards, mice and web

■ **And Windows will soon be in living room DTVs if Microsoft has their way! They have purchased the Internet Service Provider, WebTV Networks for \$425 million.** Microsoft Senior Vice President Craig Mundie said, "This acquisition is the cornerstone of our long-term effort to combine the best of the Internet and the best of digital television technology."

WebTV permits viewers to easily access the Internet from a normal television. Philips Consumer Electronics and Sony currently manufacture the WebTV set top box. There are only three wires to hook

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #8
May 1, 1997

up: one to the TV, one to a power outlet and another to a phone line. Then WebTV sets itself up at the press of a button.

WebTV makes their money from monthly connection fees and advertising. The firm was launched in 1995 after figuring out the hardware and software needs necessary to show Web pages on a regular off-the-shelf television set.

Microsoft wants to integrate its software (including a special version of "Windows") into WebTV and has big plans to build interactive technology into digital television. Both Microsoft and Intel believe that PCs and not TVs will be the broadcast receiver of the future.

■ **Two satellite radio broadcasters have paid the federal government more than \$80 million each for a DARS (Digital Audio Radio Satellite) license.** CD Radio, Inc., and American Mobile Radio Corp. hope to deliver up to 50 CD-quality audio channels to small (2-inch disk-like) antennas installed on car roofs. Subscription "pay-to-listen" service to the public (at about \$10 a month) is expected to begin within three years. Most AM/FM broadcasters oppose satellite radio -- which they see as a threat to local service.

■ Noting that some 40 million people have access to a computer, **the FCC has proposed to allow electronic comments to be filed in FCC rulemaking proceedings** using the World Wide Web and electronic mail. The commission believes this will make it easier for the public to file comments and to access comments filed by others. Only one electronic copy needs to be filed which will receive the same treatment and consideration as comments filed on paper.

■ **FCC Chairman Reed Hundt wants the computer industry to support a plan that would provide Internet access to schools.** On May 8th, the FCC will consider a plan that would require ISPs (Internet Service Providers) to offer reimbursable discounts to schools and libraries. He wants industry to E-mail their support to the other voting commissioners.

■ **The FCC has suspended collecting payments on more \$10.2 billion worth of radio spectrum from airwave bidders.** It seems that PCS spectrum buyers want delay payme by paying annually rather than quarterly payments. The FCC is considering their request.

Several bidders are in severe financial trouble and at least one (that bid \$1.4

billion last year) has already filed for bankruptcy. To date, FCC spectrum auctions (which began three years ago) have raised more than \$23 billion. The value of radiofrequencies has fallen significantly after last year's PCS auction.

Meanwhile, regulators have again begun selling still more radio spectrum. The FCC's 14th sale is for WCS (Wireless Communications Service) licenses. While the FCC did not dictate the use of the frequencies, most bidders are interested in providing wireless Internet, telephone and location services. More than \$5 million was bid the first day.

■ **Social Security website goes dark!** Have you heard the flak concerning the Social Security Administration's web page? It cost SSA some \$22 million last year to mail out four million requested PEBEs (Personal Earnings and Benefit Estimate) financial reports. Shipping it out via the Internet basically costs nothing.

Congress demanded that SSA turn off their month-old site and they have now complied. It seems that if you have a minimum amount of information, you can access anyone's private financial records (including annual income back to 1951 and estimated retirement benefits!) All you need is a social security number, mother's maiden name and state of birth.

Apparently Social Security numbers are easy to get for a small fee. There are commercial "look up services" doing business on the Web that can supply virtually any needed public records. And in some states, a person's driver's license number is the same as their social security number!

■ **The IRS's newly upgraded website (at <http://www.irs.ustreas.gov>) has been an astonishing "hit" with the online crowd!** During March and April, the site has been averaging over one million hits per day ...mostly to download federal tax forms and instructions. On April 15, the site had nearly 5 million hits and more than 20 gigabytes was downloaded to the public. The IRS can handle 3,200 file transfer (FTP) sessions simultaneously!

■ **The fifteen country European Union (EU) has taken a position opposing the so-called "bit tax" - taxes on electronic commerce taking place on the Internet.** European governments had been considering taxing Internet sales since an internal report concluded that long term, tax revenue available to European governments would likely be reduced. A resolution on Electronic Commerce from the EU is expected shortly. European opposition

to the tax is in line with the position of the United States..

■ **The Supreme Court has begun hearing arguments on Internet indecency (*Reno vs ACLU*.)** Justice Sandra O'Connor likened the Internet to a public place "...much like a public park or a street corner." And Justice Anthony Kennedy wondered if the Government could prohibit indecent conversations in the presence of minors on a public street. Justice Stephen Breyer compared the Internet to a telephone. The Justice Department's version, however, is that the Internet threatens to give every child a free pass into the equivalent of every adult bookstore and adult video store in the country."

■ **The FCC has prepared a document about what constitutes broadcast indecency** but still has it under wraps. Broadcasters are eagerly awaiting its release ...and what can and can not be said on the public airwaves and when!

■ **Ever since the web started expanding, doctors have been warning against taking health advice from the Internet.** The American Medical Association said that much of the medical information found on the Internet was incomplete, misleading and inaccurate.

Now a new government website called "Healthfinder" is doing something about the misinformation. (The address is <http://www.healthfinder.gov>)

This is a U.S. Government supervised gateway consumer health information web site supervised by federal agencies that seeks to direct people towards reliable health information.

It was badly needed since there are over 10,000 general health information sites and tens of thousands more on specific diseases and conditions. Many exist primarily to sell questionable products and services. And all sorts of "quacks" can (and do) operate out in cyberspace where there are no regulations at all!

The site was created by the U.S. Department of Health and Human Services at the specific request of Vice President Al Gore. It was just "turned on" on April 15th. (Perhaps he felt people would need reputable health care once they paid their taxes!)

The "Healthfinder" staff selects only sites that have already been preapproved by some federal agency. A very interesting "filtering" concept indeed ...and perhaps one that will be expanded to other areas! Check it out.

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #9

May 1, 1997

SPECIAL REPORT - Telephony over the Internet

Cost of telephone calls to plummet within two years!

Analysts agree, within two years, telephone calls over the Internet will be used by millions of people. And many will not even be aware of it! Rapid software advances and agreement on standards could make long distance and international Internet calling mainstream!

Products that allow the voice telephone network to be bypassed have long been a target of criticism from the telephone industry. The cost of an Internet voice call is limited to the charges required to link to the Internet and Internet access costs, which are far less than what telephone companies charge. Seeing the handwriting on the wall, entrepreneurs, cable, telephone and computer companies are jumping on the bandwagon. It will be a \$500 million business by 1999!

Consumers and experimenters are the biggest users now. But this will change as businesses tie into gateways that permit phone calls to be initiated and terminated over the POTS (plain old telephone service) network. Connectivity will be seamless and there will be little difference between pure wireline and wireline-to-Internet-to-wireline service. And it appears that the FCC will not come to the aid of wireline telcos, many of whom are screaming "foul!"

Under the 1934 Act, common carriers (such as telephone companies) must be approved and file tariffs setting forth their charges to the public. The 1996 Telecom Act defined the term "telecommunications carrier" as any provider of telecommunications services.... E-mail, real-time "Internet relay chat" and "Internet telephony" all fit within the statutory definition.

Common sense, however, suggests that Congress did not intend to treat any company that facilitates the transmission of E-mail to be a regulated public-utility.

Basic services are standard voice transmission offerings, while enhanced services are "...services, offered over common carrier transmission facilities ...which employ computer processing applications..." Specific enhanced services include alarm monitoring, voice messaging, and electronic publishing, as well as the provision of access to data networks such as commercial online services and the Internet. The Internet in its current form did not exist at the time the FCC created the basic/enhanced distinction. Internet access has always been treated as an enhanced service.

While several firms now offer software that allows for real-time voice conversations over the Internet, VocalTec, owns 95 percent of the net phone market. Voice over the Net (VON) works by converting voices into data which can be compressed and split into packets, which are sent over the Internet like any other packets and re-assembled as audio output on the at the receiving end.

Most Internet telephony software available today requires both users to use computers that are connected to the Internet at the time of the call, but more and more firms are introducing services that allow the receiving

party, or even both parties, to use an ordinary telephone.

Approximately 60,000 people now use Internet telephony products on a weekly basis and usage has been increasing rapidly. A much larger number of people will shortly have access to Internet telephony software. Intel and the leading browser makers (Netscape and Microsoft) have recently released versions of their software that incorporate this feature.

Regulation of the Internet

While the Communications Act directs the FCC to regulate "interstate and foreign commerce in communication by wire and radio," state public utility commissions regulate the rates and conditions under which ISPs (Internet Service Providers) purchase services from local telephone companies. The Commission could preempt state regulation of Internet services that is determined to be inconsistent with the achievement of federal goals.

There is also a broad statement in Section 303 of the Communications Act of 1934 which gives the Commission broad authority to address novel situations. It would be difficult to claim that the Internet does not involve interstate communications, or that the Internet does not have a significant competitive impact on existing providers of regulated communications services.

Actually, the FCC's theoretical jurisdiction over the Internet is quite expansive, because the Internet relies on communications facilities and services over which the FCC has longstanding and broad authority. The Commission's existing framework for "enhanced services" provided through the telephone network, states that "...the FCC has authority to regulate these services, but that regulation would not serve the public interest."

Regulation of Internet telephony

The FCC has not attempted to regulate the companies that provide the software and hardware for Internet telephony, or the access providers that transmit their data, as common carriers or telecommunications service providers.

In March 1996, America's Carriers Telecommunication Association (ACTA), a telephone trade association, filed a petition with the FCC asking the Commission to regulate Internet telephony. ACTA argues that providers of software that enables real-time voice communications over the Internet should be treated as common carriers and subject to the regulatory requirements.

ACTA's view, however, oversimplifies the comparison between Internet and long-distance voice telephony. Current Internet voice products do not provide audio quality comparable to the traditional long-distance service. And most existing systems require both parties to be connected to the Internet through a personal computer at the time of the call. Therefore Internet telephony is not a comparable substitute for long-distance telephone.

On the other hand, Cellular telephony typically provides poorer sound quality than wireline service, but this

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #10

May 1, 1997

fact does not affect the classification of cellular as a telecommunications service. Moreover, service providers are working to improve sound quality and ease of use, and several providers have begun to deploy "gateways" that allow Internet telephony conversations to be terminated or originated on an ordinary telephone.

Phone-to-phone technology represents the "third generation" in the rapidly developing VON sector, superseding prior releases of both computer-to-computer (using microphones and speakers on PC's) and computer-to-telephone calling. Previously, Internet voice calls also required both parties to use computers with the exact same software, thereby severely restricting the range of people who could be called via Internet.

When such phone-to-phone gateways are used, however, the pricing structure changes. Gateway providers must pay for hardware at points of presence to route voice traffic between the Internet and the voice network, and must also pay local exchange carriers to terminate or originate calls over voice lines. Thus, gateway providers plan to charge per-minute rates for their Internet telephony services, rather than the "free" calling available through current computer-computer VON products.

Finally, as a practical and policy matter, regulation of Internet telephony would be problematic. It would be virtually impossible, for example, for the FCC to regulate as carriers those companies that merely sell software to end users, or to require the ISPs segregate voice and data packets passing through their networks for regulatory purposes.

Rather, Internet telephony software could more appropriately be compared to unregulated customer premises equipment (CPE), like telephone handsets, which facilitate calling but do not themselves carry calls from one party to another. Moreover, although ACTA claims that Internet telephony unfairly deprives inter-exchange carriers of revenues, others argue that these services provide valuable competition to incumbent carriers.

State regulations seem even harder to justify. The possibility that fifty separate state Commissions could choose to regulate providers of Internet telephony services within their state (however that would be defined), already may be exerting a chilling influence on the Internet telephony market. Netscape, in its comments on the ACTA petition, argued that the Commission should assert exclusive federal jurisdiction and preempt states from regulating Internet telephony.

Internet connections may be also used for many different purposes. Some uses of the Internet -- such as voice telephony -- may fall more clearly within a plausible reading of the Communications Act. However, service providers that carry such services do not know what type of real-time data packets are passing through their networks at any given moment.

These characteristics pose difficulties for virtually every type of regulation. For example, jurisdictional divisions are the basis not only of the regulatory status of companies themselves, but also the decisions as to

which rates regulated telephone companies can charge to unregulated entities. Federal, state, and local governments use such distinctions as the basis for deciding whether they have franchising or taxation authority over companies. The problem is magnified because the Internet is international.

It is important to remember that, despite the tremendous attention given to the Internet in the past few years, it remains many orders of magnitude smaller in terms of usage and revenues than the voice telephone network in the United States. Many of the questions raised here will answer themselves as service providers fine-tune their business models and as the communications industry evolves. Once competition is sufficiently well-developed, regulation may become largely unnecessary. At some point, companies will be disciplined more strongly by market forces than by the dictates of regulators.

No matter how well-intentioned the regulator, government intervention in the private sector can have unexpected and unfortunate consequences. The first task of government policy towards these new Internet-based services should therefore be to identify those areas where regulation is clearly not appropriate.

For example, when a company such as VocalTec sells retail software that allows end users to make voice phone calls through the Internet, and nothing more, it makes little sense to classify that company as a telecommunications carrier subject to federal and state regulation. Such software providers merely enable end users to utilize a functionality through the network, much like companies that sell fax machines. They do not themselves transport telecommunications traffic. Similarly, an ISP should not be classified as a telecommunications carrier simply because some of its users choose to use Internet telephony software to engage in voice calls.

Some of the information contained in this report was excerpted from FCC Working Paper No. 29, (March 1997, 85 pages) entitled: "Digital Tornado: The Internet and Telecommunications Policy" authored by FCC Office of Plans and Policy counsel, Kevin Werbach.

He concludes, "The initial assumption ought to be that new Internet-based services should not be subject to the regulatory constraints of traditional services. Government policy should be sensitive to the fact that technology is changing rapidly, and that the Internet landscape a few years in the future may look very different than it does today."

And a recent speech by FCC Chairman Reed Hundt suggests the commission may indeed take a hands-off attitude. He said he was not inclined to slow the progress of telephony over the Internet and "...couldn't imagine that we would have the time to keep track of all the bits passing over the Internet to separate the 'acceptable' data packets from the 'unacceptable' data packets." Hundt added "I'm inclined to believe our best guidance is to let technology, competition and access reform make the problem go away."